Name _____ Date _____

Homework 1.2

Place Value and Exponents

You can use exponents to write numbers.

$10^4 = 10 \times 10 \times 10 \times 10 = 10{,}000$

You can use exponents to write numbers in expanded form.

$(8 \times 10^5) + (7 \times 10^4) + (2 \times 10^3) + (5 \times 10^2) + (9 \times 10^1) + (6 \times 10^0) = 872{,}596$

Use exponents to write each number in expanded form.

1. 19,742 _____

2. 617,945 _____

3. 56,067 _____

Write each number in standard form.

4. $(4 \times 10^5) + (9 \times 10^4) + (5 \times 10^3) + (7 \times 10^2) + (6 \times 10^1) + (3 \times 10^0)$ _____

5. $(2 \times 10^4) + (1 \times 10^3) + (8 \times 10^2) + (5 \times 10^1) + (1 \times 10^0)$ _____

What is the value of *n* in each equation?

6. $60{,}000 = 6 \times 10^n$ _____

7. $5^2 \times 3 = n$ _____

Problem Solving

Show Your Work

8. Are 10^0 and 2^0 equal? Why or why not?

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